REMARKS/ARGUMENTS

The Applicant acknowledges, with thanks, the office action dated December 15, 2008. Examiner's consideration of Applicant's arguments filed on March 17, 2008, is noted with appreciation. By this amendment, claims 16 – 18 have been added

The subject matter of claim 16 is not new matter as it is disclosed in paragraphs 37-38 of the original application. The subject matter of claim 17 is not new matter as it is disclosed in paragraph 37. The subject matter of claim 18 is not new matter as it is disclosed in paragraph 37 (*cf.* Fig. 4, 406-408 and Fig. 1, 110). Reconsideration of this application as amended is respectfully requested.

Prior-Art Matters

Claims 1, 2, 6, 8, 9 and 13 sand rejected as being obvious in view of the combination of U.S. Patent No. 5,555,396 to Alferness et al. (*hereinafter,* "Alferness") in view of U.S. Patent No. 5,926,458 to Yin ("Yin"). Claims 3 and 10 stand rejected as being obvious in view of the combination of Alferness,, Yin, U.S. Patent No. 6,810,012 to Yin et al. (*hereinafter,* "Yin '012' "), and U.S. Patent Publication No. 2002/0044529 to Giroux et al. (*hereinafter,* "Giroux"). Claims 4 and 11 stand rejected as being obvious in view of the combination of Alferness, Yin, Yin '012' Giroux, U.S. Patent No. 7,047,312 to Aweya et al. (*hereinafter,* "Aweya") and U.S. Patent No. 6,789,050 to Reeser et al. (*hereinafter,* "Reeser"). Claims 5 and 12 stand rejected as being obvious in view of the combination of Alferness, Yin and U.S. Patent no. 5,463,620 to Sriram. Claims 7 and 14 stand rejected as being obvious in view of the combination of Alferness, Yin, and U.S. Patent No. 6,826,182 to Parthasarathy. Claim 15 stands rejected as being obvious in view of the combination of Yin and U.S. Patent Publication No. 2008/0002707 to Davis. Withdrawal of these rejections is requested for the reasons that will be set forth herein.

Independent claims 1 recites a method or system for queue management. The method comprises transforming a plurality of consecutive packets into a queue set data structure based on a target queue set data structure size. The plurality of consecutive packets are associated with the queue, comprises a first packet having a first packet size and a second packet having a second packet size (namely the packets in the queue data structure are of different sizes as opposed to

the queues themselves). Independent claim 8 recites a system for implementing queue management employing the aforementioned method.

By contrast, Alferness aggregates message segments into a queue. Alferness does not teach or suggest that packets of different sizes can be combined into a queue set data structure up to a target queue set data structure size. Therefore, Alferness does not teach or suggest each and every element of independent claims 1 and 8. Consequently independent claims 1 and 8 are not anticipated by Alferness.

In rejecting claims 1 and 15, the examiner relies on Yin (col. 1, lines 66-67 and col. 2, lines 65-66) for disclosing packets stored in the queues have different lengths. Assuming *arguendo* that this is true, Yin still does not remedy the aforementioned deficiency in Alferness. Alferness, like claim 1, is directed to aggregating messages (packets) into a single structure that are then queued (or de-queued) in a single operation. Yin is directed to servicing multiple queues and determining how to select which queue to service.

The aforementioned deficiencies in Alferness and Yin are not remedied by any teachings Yin '012, Giroux, Aweya, Reeser, Sriram, Parthasarathy, nor Davis. Yin '458 is directed to a system that identifies a queue service time associated with each of the multiple queues. A particular queue service time is selected that has the minimal value of all identified queue service times. Yin '012 is directed to a cell scheduler for use with a cell queue in an ATM network. The examiner relies on Yin '012 for teaching performing queuing operations on queue sets based upon a desired data rate. However, Yin '012 does not teach or suggest that packets of different sizes are transformed into a queue set data structure where the sum of the packet sizes is less than a target queue set data structure size.

Giroux discloses a target queue size and can change the queue size but Giroux is directed to an ATM which has fixed packet sizes. Giroux does not teach or suggest that packets of different sizes are transformed into a queue set data structure where the sum of the packet sizes is less than a target queue set data structure size. The examiner relies on Giroux for determining the queue service interval based upon a target queue set data structure size.

Aweya is directed to a technique for controlling the transmission of data packets through a network by controlling a TCP rate in a network device having a shared buffer with shared buffer space. However, Aweya does not teach or suggest that packets of different sizes are

transformed into a queue set data structure where the sum of the packet sizes is less than a target queue set data structure size. The examiner relies on Aweya for detecting congestion by taking the difference (comparing) the average queue size with the target queue size.

Reeser is directed to a method for modeling a web server. The server is modeled by identifying a plurality of sub-systems for each server, where each sub-system is represented as a queue, with each queue operably coupled to each other. The arrival rate and a service time is iteratively adjusted for each queue to account for performance by other queues. Thus, nothing in Reesar teaches or suggests that packets of different sizes are transformed into a queue set data structure where the sum of the packet sizes is less than a target queue set data structure size. The examiner relies on Reesar for adjusting the queue service interval based upon congestion.

Sriram is directed to a system wherein communications traffic in each node of a high speed network (ATM which as noted herein *supra* uses a fixed packet size structure) is segregated in accordance with signal characteristics. The examiner relies on Sriram for shaping traffic flow of the queue set at a rate of transmission of data from the queue. Siram does not teach or suggest that packets of different sizes are transformed into a queue set data structure where the sum of the packet sizes is less than a target queue set data structure size.

Parthasarathy is directed to a multi-cast routing method for asynchronous propagation for messages from any source location to its pre-configured replication nodes in an advanced intelligent network. However, Parthasarathy does not teach or suggest that packets of different sizes are transformed into a queue set data structure where the sum of the packet sizes is less than a target queue set data structure size. The examiner relies on Parthasarathy for determining that each queue of a plurality of consecutive queues is the same (identical message queues); using one representative queue to represent the plurality of consecutive queues; a replication count of the queue being equivalent to the number of queues in the plurality of consecutive queues; and performing a queuing operation on the representative queue such that the queuing operation is performed on each of the plurality of consecutive queues.

Davis is directed to a flexible method for processing data packets in a network routing system. A network device for receiving data packets for transmitting data packets includes an integrated port controller integrated circuit for routing packets. The integrated circuit includes a rate shaper counter for storing credit for a traffic class. The integrated circuit may be associated

with an IRAM, a CAM, a parameter memory configured to hold routing and/or switching parameters, which may be implemented as a PRAM, and an aging RAM, which stores aging information. The aging information may be used by a CPU coupled to the integrated circuit to remove entries from the CAM and/or the PRAM when an age count exceeds an age limit threshold for the entries. Davis is relied by the Examiner to teach a method of managing a queue of packets using queue set data structures wherein at least one packet is a multicast packet. However, Davis does not teach or suggest that packets of different sizes are transformed into a queue set data structure where the sum of the packet sizes is less than a target queue set data structure size. Therefore, for the reasons just set forth Alferness, Yin '458, Yin '012, Giroux, Aweya, Reeser, Sriram, Parthasarathy, and/or Davis do not teach or suggest each and every element of independent claims 1 and 8. Thus claims 1 and 8 are not anticipated and/or obvious in view of Alferness, Yin '458, Yin '012, Giroux, Aweya, Reeser, Sriram, Parthasarathy, and/or Davis, alone or in any combination.

Claims 2-7 and 15 directly depend from claim 1 and thus contain each and every element of claim 1. Claims 9-14 and 16 directly depend from claim 8 and thus contain each and every element of claim 8. Therefore, for the reasons already set forth for claims 1 and 8, claims 2-7 and 9-16 are not anticipated and/or obvious in view of Alferness, Yin '458, Yin '012, Giroux, Aweya, Reeser, Sriram, Parthasarathy, and/or Davis.

In addition to the reasons set forth above, new claim 16 recites the method of claim 1, further comprising determining whether transforming a third consecutive packet into the queue set data structure results in the sum of the packet sizes exceeding the target queue set data structure size. In response to determining the sum exceeds the target queue set data structure size, the queue set data structure is closed and a new one is opened. The target queue set data structure size is adjusted based upon an amount the sum of the packet sizes exceeds the target set data structure size. Such a method is not taught or suggested by Alferness, Yin '458, Yin '012, Giroux, Aweya, Reeser, Sriram, Parthasarathy, and/or Davis. Thus, in addition to the reasons already set forth for claim 1, claim 16 is not obvious in view of Alferness, Yin '458, Yin '012, Giroux, Aweya, Reeser, Sriram, Parthasarathy, and/or Davis.

In addition to the reasons set for above, new claim 17 recites the method of claim 1 further comprising adjusting a target queue set data structure size allocated for a next queue set

data structure so that the average of the queue sets is approximately target queue set size. In other words the size of the current queue set data structure can be varied as long s the average of the queue set data sizes is approximately the target queue set data size. Such a method is not taught or suggested by Alferness, Yin '458, Yin '012, Giroux, Aweya, Reeser, Sriram, Parthasarathy, and/or Davis. Thus, in addition to the reasons already set forth for claim 1, claim 17 is not obvious in view of Alferness, Yin '458, Yin '012, Giroux, Aweya, Reeser, Sriram, Parthasarathy, and/or Davis.

In addition to the reasons set forth above, new claim 18 recites the method of claim 1 the performing a queuing operation on the queue set data structure further comprises determining a first replication count for the first packet, determining a second replication count for the first packet, replicating the first packet corresponding to the first replication count and replicating the second packet corresponding to the second replication count, wherein one of a group consisting of the first replication count and second replication count is greater than 1. Such a method is not taught or suggested by Alferness, Yin '458, Yin '012, Giroux, Aweya, Reeser, Sriram, Parthasarathy, and/or Davis. Parthasarathy, in contradistinction, replicates the entire message, not individual packets within a queue set data structure (single entity). Thus, in addition to the reasons set forth above, Thus, in addition to the reasons already set forth for claim 1, claim 18 is not obvious in view of Alferness, Yin '458, Yin '012, Giroux, Aweya, Reeser, Sriram, Parthasarathy, and/or Davis.

Conclusion

Withdrawal of the rejections to this application is requested for the reasons set forth and a Notice of Allowance is earnestly solicited. If there are any fees necessitated by the foregoing communication, the Commissioner is hereby authorized to charge such fees to our Deposit Account No. 50-0902, referencing our Docket No. 72255/00462.

Respectfully submitted,

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Larry B. Donovan
Registration No. 47,230
TUCKER ELLIS & WEST LLP
1150 Huntington Bldg.
925 Euclid Ave.
Cleveland, Ohio 44115-1414
Customer No.: 23380
Tel.: (216) 696-3864
Fax: (216) 592-5009